

**Example #12:** A 5000. kg truck going at 15 m/s makes a head on collision with a 1000. kg Honda that was going 20 m/s. The wreckage sticks together. Find the velocity of the wreckage just after the collision.

<u>before</u>	"head-on" in opposite direction	<u>after</u>
$p_T = 5000(15) + 1000(-20)$		$p_T = (5000 + 1000)v$
$= 55000$		$= 6000 v$

$$55000 = 6000 v$$

$$v = 9.2 \text{ m/s}$$